

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO. 38005-0152

In re patent application of:  
Heinrich DECKER

Appln. No. Unassigned Art Unit: Unassigned

Filed: August 7, 2001 Examiner: Unassigned

For: ISOLATION OF THE BIOSYNTHESIS GENES FOR PSEUDO-  
OLIGOSACCHARIDES FROM STREPTOMYCES GLAUCESCENS GLA.O AND  
THEIR USE

**PRELIMINARY AMENDMENT**

Commissioner of Patents  
Washington, DC 20231

Sir:

Prior to examination please amend the above-identified Application as set forth in the Amendments below and in the attached Marked Copy. This is a divisional application of 09/194,905, filed 12/29/98 which claims priority to PCT/EP97/02826 filed 5/30/97 and DE 19622783.6 filed 6/7/96.

**Amendments**

**In the Specification:**

Page 1, before line 6, insert the following new paragraph:

This application is a division of U.S. Application No. 09/194,905 filed December 29, 1998. The entirety of these applications are hereby incorporated by reference.

**In the Claims:**

Please cancel claims 1-33 and 38-48 without prejudice or disclaimer, and amend the remaining claims as follows:

34. (Amended once) Process for preparing acarbose, comprising the steps of:

- (i) expressing DNA in a suitable host cell, and
- (ii) isolating from culture supernatants of said host cell acarbose, wherein said DNA is selected from the group consisting of (a) nucleotides 1-720 of Table 4, (b) nucleotides 720 to 2006 of Table 4; (c) nucleotides 2268-3332 of Table 4; (d) nucleotides 3332-4306 of Table 4; (e) nucleotides 4380-5414 of Table 4; and (f) nucleotides 5676-6854 of Table 4.

35. (Amended once) Process for preparing acarbose according to Claim 34, wherein said host cell is selected from the group consisting of *E. coli*, *Bacillus subtilis*, *Streptomyces*, *Actinoplanes*, *Ampullariella* or *Streptosporangium* strains, *Streptomyces hygroscopicus* var. *limoneus* or *Streptomyces glaucescens*, *Aspergillus niger*, *Penicillium chrysogenum* and *Saccharomyces cerevisiae*.

36. (Amended Once) Process for preparing acarbose comprising the steps of:

- (i) eliminating DNA in a natural acarbose – producing host cell; and,
- (ii) isolating acarbose from said host cell; wherein said DNA is selected from the group consisting of (a) nucleotides 1-720 of Table 4, (b) nucleotides 720 to 2006 of Table 4; (c) nucleotides 2268-3332 of Table 4; (d) nucleotides 3332-4306 of Table 4; (e) nucleotides 4380-5414 of Table 4; and (f) nucleotides 5676-6854 of Table 4.

37. (Amended Once) Process for preparing acarbose according to Claim 36, wherein said host cell is selected from the group consisting of *streptomyces glaucescens* GLA.O and *Actinoptanes* sp.

**Remarks**

Applicant respectfully requests that the foregoing amendments be made prior to examination of the present application. These amendments add no new matter. A first Office Action on the merits is awaited.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Date: August 7, 2001

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

34. (Amended once) Process for preparing acarbose, comprising the steps of: [characterized in that

- (a) one or more genes according to one or more of Claims 6 to 11 are used for expression in a suitable host cell, and
- (b) the acarbose is isolated from culture supernatants of said host cell.]
  - (i) expressing DNA in a suitable host cell, and
  - (ii) isolating from culture supernatants of said host cell acarbose, wherein said DNA is selected from the group consisting of (a) nucleotides 1-720 of Table 4, (b) nucleotides 720 to 2006 of Table 4; (c) nucleotides 2268-3332 of Table 4; (d) nucleotides 3332-4306 of Table 4; (e) nucleotides 4380-5414 of Table 4; and (f) nucleotides 5676-6854 of Table 4.

35. (Amended once) Process for preparing acarbose according to Claim 34, [characterized in that] wherein said host [cells according to one of Claims 21 or 22 are selected.] cell is selected from the group consisting of E. coli, Bacillus subtilis, Streptomyces, Actinoplanes, Ampullariella or Streptosporangium strains, Streptomyces hygroscopicus var. limoneus or Streptomyces glaucescens, Aspergillus niger, Penicillium chrysogenum and Saccharomyces cerevisiae.

36. (Amended Once) Process for preparing acarbose comprising the steps of: [characterized in that

- (a) one or more genes according to one or more of Claims 6 to 11 are eliminated in a natural acarbose-producing host cell, and
- (b) the acarbose is isolated from said host cell.]
  - (i) eliminating DNA in a natural acarbose – producing host cell; and,
  - (ii) isolating acarbose from said host cell; wherein said DNA is selected from the group consisting of (a) nucleotides 1-720 of Table 4, (b) nucleotides 720 to 2006 of Table 4; (c) nucleotides 2268-3332 of Table 4; (d) nucleotides 3332-4306 of Table 4; (e) nucleotides 4380-5414 of Table 4; and (f) nucleotides 5676-6854 of Table 4.

37. (Amended Once) Process for preparing acarbose according to Claim 36, wherein said [characterized in that] host [cells according to Claim 22 are selected] cell is selected from the group consisting of streptomyces glaucescens GLA.O and Actinoptanes sp.